

**To:** Kavlock, Robert[Kavlock.Robert@epa.gov]; Sayles, Gregory[Sayles.Gregory@epa.gov]  
**From:** Orme-Zavaleta, Jennifer  
**Sent:** Fri 8/14/2015 7:15:51 PM  
**Subject:** RE: remote sensing response to Gold King Mine spill into the Animas River

Ok

Sent from my Windows Phone

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**From:** Kavlock, Robert  
**Sent:** 8/14/2015 15:13  
**To:** Orme-Zavaleta, Jennifer; Sayles, Gregory  
**Subject:** RE: remote sensing response to Gold King Mine spill into the Animas River

Lets do 3:30 EDT

Nonresponsive Conference Code

**From:** Orme-Zavaleta, Jennifer  
**Sent:** Friday, August 14, 2015 3:03 PM  
**To:** Kavlock, Robert; Sayles, Gregory  
**Subject:** RE: remote sensing response to Gold King Mine spill into the Animas River

Am now. Call my cell or give a number to call in to

Sent from my Windows Phone

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**From:** Kavlock, Robert  
**Sent:** 8/14/2015 14:26  
**To:** Orme-Zavaleta, Jennifer; Sayles, Gregory  
**Subject:** RE: remote sensing response to Gold King Mine spill into the Animas River

You around to talk?

**From:** Orme-Zavaleta, Jennifer  
**Sent:** Friday, August 14, 2015 2:08 PM  
**To:** Sayles, Gregory; Kavlock, Robert  
**Subject:** FW: remote sensing response to Gold King Mine spill into the Animas River  
**Importance:** High

See below and let me know what you think

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**From:** Neale, Anne  
**Sent:** 8/14/2015 14:01  
**To:** Orme-Zavaleta, Jennifer; McDonald, Michael E.  
**Subject:** FW: remote sensing response to Gold King Mine spill into the Animas River

Hi Jennifer and Mike,

You may already have spoken to Blake or others but Taylor brings up a really great point about remote sensing capabilities.

Annie

Anne Neale

EnviroAtlas Project Lead

US EPA, RTP, NC

919-541-3832

**From:** Jarnagin, Taylor

**Sent:** Friday, August 14, 2015 1:42 PM

**To:** Neale, Anne

**Subject:** remote sensing response to Gold King Mine spill into the Animas River

**Importance:** High

Hi Annie,

I think this is an excellent candidate for the use of remote sensing with a multispectral or hyperspectral sensor to identify and map the sediments from the Gold King Mine spill into the Animas River.

Our local talent includes: Blake Schaeffer and Drew Pilant (both of whom could analyze imagery) and David J. Williams (who is working on putting together a sensor just for this type of occasion, unfortunately, I don't think that sensor has been fully tested and is operation right now). The Environmental Photographic Interpretation Center existed for exactly this sort of emergency response capability and to act as a liaison between the contractors who would fly and analyze the imagery and the Regions who had the boots on the ground and were directly responsible for the clean-up.

Our current contact for the capability to do this is:

H. Craig Seaver

Remote Sensing Manager

EPA National Computer Center

Office of Technology Operations and Planning

Office of Environmental Information

Phone: (919) 541-4436

Email: [seaver.craig@epa.gov](mailto:seaver.craig@epa.gov)

Taylor

S. Taylor Jarnagin, Ph.D.

Research Ecologist

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Web Site:

< <http://www.epa.gov/nerlesd1/land-sci/staff/jarnagin.htm> >

Main Research Project:

"Collaborative Research: Streamflow, Urban Riparian Zones, BMPs, and Impervious Surfaces":

< <http://www.epa.gov/nerlesd1/land-sci/clarksburg01-05.htm> >